SEQUENCE LISTING

<110>   ALTENBUCHNER, Josef
        MATTES, Ralf
        PIETZSCH, Markus
        SYLDATK, Christoph
        WIESE, Anja
        WILMS, Burkard

<120>   RECOMBINANT L-N-CARBAMOYLASE FROM ARTHROBACTER AURESCENS AND
        METHOD OF PRODUCING L-AMINO ACIDS THEREWITH

<130>   021123-0284981

<140>   US 10/045063
<141>   2002-01-15

<150>   US 09/285055
<151>   1999-04-02

<150>   DE 198 14 813.5
<151>   1998-04-02

<160>   5

<170>   PatentIn version 3.3

<210>   1
<211>   1239
<212>   DNA
<213>   Arthrobacter aurescens

<400>   1
gtgaccctgc agaaagcgca agcggcgcgc attgagaaag agatccggga gctctcccgg 60
ttctcggcag aaggccccgg tgttacccgg ctgacctaca ctccagagca tgccgccgcg 120
cgggaaacgc tcattgcggc tatgaaagcg gccgccttga gcgttcgtga agacgcactc 180
ggaaacatca tcggccgacg tgaaggcact gatccggagc ttcctgcgat cgcggtcggt 240
tcacacttcg attctgtccg aaacggcggg atgtttgatg gcactgcagg cgtggtgtgc 300
gcccttgagg ctgcccgggt gatgctggag aacggctacg tgaatcggca tccatttgag 360
ttcatcgcga tcgtggagga ggaaggggcc cgcttcagca gtggcatgtt gggcggccgg 420
gccattgcag ggttggtcgc cgacagggaa ctggactctt tggttgatga ggatggagtg 480
tccgttaggc aggcggctac tgccttcggc ttgaagccgg gcgaactgca ggctgcagcc 540
cgctccgcgg cggacctgcg tgcttttatc gaactacaca ttgaacaagg accgatcctc 600
gagcaggagc aaatagagat cggagttgta acctccatcg ttggcgttcg cgcattgcgg 660
gttgccgtca aaggcagaag cgaccacgcc ggcacaaccc ccatgcacct gcgccaggat 720
gcgctggtac cgccgctct catggtgagg gaggtcaacc ggttcgtcaa cgagatcgcc 780
gatggcacag tggctaccgt tggccacctc acagtggccc ccggtggagg caaccaggtc 840
ccggggggagg tggacttcac actggacctg cgttctccgc atgaggagtc gctccgcgtg 900
ctgatcgacc gcatctcggt catggtcggc gaggtcgcct cccaggccgg tgtggctgcc 960
gatgtggatg aattttttcaa tctcagcccg gtgcagctgg ctcctaccat ggtggacgcc 1020
gttcgcgaag cggcctcggc cttgcagttc acacaccggg atatcagcag tggggcgggc 1080
cacgactcga tgttcatcgc ccaggtcacg gacgtcggaa tggttttcgt tccaagccgt 1140
gctggccgga ccacgttcc cgaagaatgg accgatttcg atgaccttcg caaaggaact 1200
gaggttgtcc tccgggtaat gaaggcactt gaccggtaa 1239

<210>   2
<211>   412
<212>   PRT
<213>   Arthrobacter aurescens

<400> 2

```
Met Thr Leu Gln Lys Ala Gln Ala Ala Arg Ile Glu Lys Glu Ile Arg
1               5                   10                  15

Glu Leu Ser Arg Phe Ser Ala Glu Gly Pro Gly Val Thr Arg Leu Thr
            20                  25                  30

Tyr Thr Pro Glu His Ala Ala Ala Arg Glu Thr Leu Ile Ala Ala Met
            35                  40                  45

Lys Ala Ala Ala Leu Ser Val Arg Glu Asp Ala Leu Gly Asn Ile Ile
        50                  55                  60

Gly Arg Arg Glu Gly Thr Asp Pro Glu Leu Pro Ala Ile Ala Val Gly
65                  70                  75                  80

Ser His Phe Asp Ser Val Arg Asn Gly Gly Met Phe Asp Gly Thr Ala
                85                  90                  95

Gly Val Val Cys Ala Leu Glu Ala Ala Arg Val Met Leu Glu Asn Gly
                100                 105                 110

Tyr Val Asn Arg His Pro Phe Glu Phe Ile Ala Ile Val Glu Glu Glu
            115                 120                 125

Gly Ala Arg Phe Ser Ser Gly Met Leu Gly Gly Arg Ala Ile Ala Gly
        130                 135                 140

Leu Val Ala Asp Arg Glu Leu Asp Ser Leu Val Asp Glu Asp Gly Val
145                 150                 155                 160

Ser Val Arg Gln Ala Ala Thr Ala Phe Gly Leu Lys Pro Gly Glu Leu
                165                 170                 175

Gln Ala Ala Ala Arg Ser Ala Ala Asp Leu Arg Ala Phe Ile Glu Leu
                180                 185                 190

His Ile Glu Gln Gly Pro Ile Leu Glu Gln Glu Gln Ile Glu Ile Gly
        195                 200                 205

Val Val Thr Ser Ile Val Gly Val Arg Ala Leu Arg Val Ala Val Lys
    210                 215                 220

Gly Arg Ser Asp His Ala Gly Thr Thr Pro Met His Leu Arg Gln Asp
225                 230                 235                 240

Ala Leu Val Pro Ala Ala Leu Met Val Arg Glu Val Asn Arg Phe Val
                245                 250                 255

Asn Glu Ile Ala Asp Gly Thr Val Ala Thr Val Gly His Leu Thr Val
            260                 265                 270

Ala Pro Gly Gly Gly Asn Gln Val Pro Gly Glu Val Asp Phe Thr Leu
        275                 280                 285

Asp Leu Arg Ser Pro His Glu Glu Ser Leu Arg Val Leu Ile Asp Arg
        290                 295                 300

Ile Ser Val Met Val Gly Glu Val Ala Ser Gln Ala Gly Val Ala Ala
305                 310                 315                 320
```

```
Asp Val Asp Glu Phe Phe Asn Leu Ser Pro Val Gln Leu Ala Pro Thr
                325                 330                 335

Met Val Asp Ala Val Arg Glu Ala Ala Ser Ala Leu Gln Phe Thr His
                340                 345                 350

Arg Asp Ile Ser Ser Gly Ala Gly His Asp Ser Met Phe Ile Ala Gln
                355                 360                 365

Val Thr Asp Val Gly Met Val Phe Val Pro Ser Arg Ala Gly Arg Ser
    370                 375                 380

His Val Pro Glu Glu Trp Thr Asp Phe Asp Asp Leu Arg Lys Gly Thr
385                 390                 395                 400

Glu Val Val Leu Arg Val Met Lys Ala Leu Asp Arg
                405                 410
```

<210> 3
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Radioactively marked oligonucleotide

<220>
<221> misc_feature
<222> (12)..(12)
<223> n is A, G, C or T

<400> 3
atgttygayg tnathgt   17

<210> 4
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 4
agaacatatg tttgacgtaa tagttaagaa   30

<210> 5
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 5
aaaaggatcc tcacttcgac gcctcgta   28
```